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Amendment and Response

Applicant: Sherry L. Krill et al.
Serial No.: 10/633,059
Filed: August 1, 2003
Docket No.: 200208910-1

Title: A METHOD AND APPARATUS FOR SEEDING A RANDOM NUMBER GENERATOR

APR 30 2007

IN THE CLAIMS

Please cancel claims 1, 3, 11, 14, and 17 without prejudice.

Please add claims 20-29.

Please amend claims 2, 4, 7-10, 12, 15, and 18 as follows:

1. (Cancelled)

2. (Currently Amended) The method recited in claim 1, further comprising the further step of: A method for seeding a random number generator, the method comprising the steps of:

- (a) retrieving a first data block from a memory;
- (b) initially seeding the random number generator using said first data block as a seed;
- (c) retrieving a number generated by the random number generator;
- (d) mapping said number to a memory address in said memory using a mathematical function;
- (e) retrieving a successive data block from said memory address;
- (f) successively seeding the random number generator with a combination of said seed and said successive data block such that said combination of said seed and said successive data block becomes a resulting seed of the random number generator; and
- (e') after each performance of (e), testing for satisfaction of at least one criterion and if said at least one criterion is not satisfied, repeating (c), (d), (e), and (e'), wherein a criterion of said at least one criterion is an absence of a string of identical bits in said successive data block longer than a specified number of bits.

3. (Cancelled)

4. (Currently Amended) The method recited in claim 3, wherein said specified number is equal to the number of bits in said successive data block.

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5. (Original) The method recited in claim 2, further comprising the further step of:
(e") after each performance of (e'), checking the number of repetitions of (c), (d), (e), and (e') due to failure to satisfy said at least one criterion and stopping said repetitions when a specified number of said repetitions have been performed.
6. (Original) The method recited in claim 5, wherein said specified number of said repetitions is two.
7. (Currently Amended) The method recited in claim 1 A method for seeding a random number generator, the method comprising the steps of:
(a) retrieving a first data block from a memory;
(b) initially seeding the random number generator using said first data block as a seed;
(c) retrieving a number generated by the random number generator;
(d) mapping said number to a memory address in said memory using a mathematical function;
(e) retrieving a successive data block from said memory address; and
(f) successively seeding the random number generator with a combination of said seed and said successive data block such that said combination of said seed and said successive data block becomes a resulting seed of the random number generator,
wherein said first data block includes an identifier unique to a specified computer device.
8. (Currently Amended) The method recited in claim 1 claim 9, wherein said first data block includes previously saved data.
9. (Currently Amended) The method of claim 1 A method for seeding a random number generator, the method comprising the steps of:
(a) retrieving a first data block from a memory;
(b) initially seeding the random number generator using said first data block as a seed;

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- (c) retrieving a number generated by the random number generator;
- (d) mapping said number to a memory address in said memory using a mathematical function;
- (e) retrieving a successive data block from said memory address; and
- (f) successively seeding the random number generator with a combination of said seed and said successive data block such that said combination of said seed and said successive data block becomes a resulting seed of the random number generator,

wherein said mathematical function used in said mapping is:

$$f(x) = x \pmod{m} + b \quad \text{for } x < b;$$

$$f(x) = x \quad \text{for } b \leq x \leq b + m; \text{ and}$$

$$f(x) = x \pmod{m} + b \quad \text{for } x > b + m;$$

wherein $f(x)$ = said memory address to which said generated number is mapped;

x = retrieved number generated by random number generator;

b = base memory address; and

m = memory size.

10. (Currently Amended) The method recited in claim 1 A method for seeding a random number generator, the method comprising the steps of:

- (a) retrieving a first data block from a memory;
- (b) initially seeding the random number generator using said first data block as a seed;
- (c) retrieving a number generated by the random number generator;
- (d) mapping said number to a memory address in said memory using a mathematical function;
- (e) retrieving a successive data block from said memory address; and
- (f) successively seeding the random number generator with a combination of said seed and said successive data block such that said combination of said seed and said successive data block becomes a resulting seed of the random number generator,

wherein said combination of said seed and said successive data block is accomplished by hashing said seed and said successive data block.

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11. (Cancelled)

12. (Currently Amended) ~~The apparatus recited in claim 11, wherein said processor is further programmed to:~~ An apparatus for seeding a random number generator, the apparatus comprising:

a memory; and

a processor operatively coupled to said memory, wherein said processor is programmed to:

(a) retrieve a first data block from said memory;

(b) initially seed the random number generator using said first data block as a seed;

(c) retrieve a number generated by the random number generator;

(d) map said number to a memory address in said memory using a mathematical function;

(e) retrieve a successive data block from said memory address;

(f) successively seed the random number generator with a combination of said seed and said successive data block such that said combination of said seed and said successive data block becomes a resulting seed of the random number generator; and

(e') after each performance of (e), test for satisfaction of at least one criterion and if said at least one criterion is not satisfied, repeat (c), (d), (e), and (e'),

wherein a criterion of said at least one criterion is an absence of a string of identical bits in said successive data block longer than a specified number of bits.

13. (Original) The apparatus recited in claim 12, wherein said processor is further programmed to:

(e'') after each performance of (e'), check the number of repetitions of (c), (d), (e), and (e') due to failure to satisfy said at least one criterion and stop said repetitions when a specified number of said repetitions have been performed.

14. (Cancelled)

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15. (Currently Amended) The apparatus recited in claim 14, further comprising: An apparatus for seeding a random number generator, the apparatus comprising:

- (a) means for retrieving a first data block from a memory;
- (b) means for initially seeding the random number generator using said first data block as a seed;
- (c) means for retrieving a number generated by the random number generator;
- (d) means for mapping said number to a memory address in said memory using a mathematical function;
- (e) means for retrieving a successive data block from said memory address;
- (f) means for successively seeding the random number generator with a combination of said seed and said successive data block such that said combination of said seed and said successive data block becomes a resulting seed of the random number generator; and

(e') means for testing for satisfaction of at least one criterion after each use of said means for said retrieving said successive data block of (e), and if said at least one criterion is not satisfied, repeating (c), (d), (e), and (e'),
wherein a criterion of said at least one criterion is an absence of a string of identical bits in said successive data block longer than a specified number of bits.

16. (Original) The apparatus recited in claim 15, further comprising:

(e'') means for checking the number of repetitions of (c), (d), (e), and (e') due to failure to satisfy said at least one criterion after each use of said means for said testing and repeating of (e'), and stopping said repeating when a specified number of said repetitions have been performed.

17. (Cancelled)

18. (Currently Amended) The computer-readable medium recited in claim 17, wherein said method further comprises the further step of: A computer-readable medium having computer-readable instructions for performing a method of seeding a random number generator, the method comprising the steps of:

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- (a) retrieving a first data block from a memory;
- (b) initially seeding the random number generator using said first data block as a seed;
- (c) retrieving a number generated by the random number generator;
- (d) mapping said number to a memory address in said memory using a mathematical function;
- (e) retrieving a successive data block from said memory address;
- (f) successively seeding the random number generator with a combination of said seed and said successive data block such that said combination of said seed and said successive data block becomes a resulting seed of the random number generator; and
- (e') after each performance of (e), testing for satisfaction of at least one criterion and if said at least one criterion is not satisfied, repeating (c), (d), (e), and (e'),
wherein a criterion of said at least one criterion is an absence of a string of identical bits in said successive data block longer than a specified number of bits.

19. (Original) The computer-readable medium recited in claim 18, wherein said method further comprises the further step of:

(e'') after each performance of (e'), checking the number of repetitions of (c), (d), (e), and (e') due to failure to satisfy said at least one criterion and stopping said repetitions when a specified number of said repetitions have been performed.

20. (New) The method recited in claim 9, wherein said first data block includes an identifier unique to a specified computer device.

21. (New) The apparatus recited in claim 12, wherein said first data block includes an identifier unique to a specified computer device.

22. (New) The apparatus recited in claim 12, wherein said first data block includes previously saved data.

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23. (New) The apparatus recited in claim 12, wherein said combination of said seed and said successive data block is accomplished by hashing said seed and said successive data block.
24. (New) The apparatus recited in claim 15, wherein said first data block includes an identifier unique to a specified computer device.
25. (New) The apparatus recited in claim 15, wherein said first data block includes previously saved data.
26. (New) The apparatus recited in claim 15, wherein said combination of said seed and said successive data block is accomplished by hashing said seed and said successive data block.
27. (New) The computer-readable medium recited in claim 18, wherein said first data block includes an identifier unique to a specified computer device.
28. (New) The computer-readable medium recited in claim 18, wherein said first data block includes previously saved data.
29. (New) The computer-readable medium recited in claim 18, wherein said combination of said seed and said successive data block is accomplished by hashing said seed and said successive data block.